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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,261

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Martin Bussmann

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EXAMINER

SMITH, NICHOLAS A

ART UNIT

PAPER NUMBER

1723

MAIL DATE

DELIVERY MODE

03/02/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,261	Applicant(s) BUSSMANN ET AL.	
	Examiner NICHOLAS A. SMITH	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant cannot rely upon the foreign priority papers to overcome the rejection under Mielke (US 7462273 B2) because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Election/Restrictions

2. Newly submitted claims 7-8 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the apparatus of claim 7 can be used to perform a materially different process than the process as claimed. For instance, the apparatus of claim 7 can perform machining on a part that is not a blade.

3. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 7-8 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Mielke.

6. In regards to claim(s) 5, Mielke discloses a method of manufacturing blisk blades on an outer circumference of an impeller using a molded cathode (**13'**; Figs. 5-8; col. 4, lines 9-17) by electrochemical machining to contour a surface of the blade (surface of **17a**; Fig. 8); contouring (producing an outline) is achieved as the left side of **17a** is an outline the right side of **13'**. Furthermore, simultaneously, a structure on the surface of the blade (curved surface of **17a**) is produced by the molded cathode (**13'**) that creates a negative of a structure on the molded cathode.

7. In regards to claim(s) 6, structure production of a high surface finish is a smooth layer that minimizes boundary layers, since a high surface finish is a minimum amongst low surface finishes (col. 1, lines 35-48).

8. Claims 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Burns et al. (US 4851090)

9. Burns et al. discloses a method of manufacturing blisk blades on the outside circumference of an impeller using a molded cathode (first and second electrodes) by electrochemical machining (abstract). Burns et al. discloses contouring with the molded cathode(s) (**18, 20**; Fig. 14) in which the surface of a blade (**100**) is contoured by a molded cathode in that the molded cathode produces an outline on the blisk blade surface. Furthermore, simultaneously, a structure on the surface of the blade (curved surface of **100**; Fig. 14) is produced by the molded cathode (**18** or **20**) that creates a negative of a structure on the molded cathode.

10. In regards to claim(s) 6, Burns et al. discloses the molded cathodes create a negative structure on the blisk blades that minimizes boundary layers in one manufacturing step (col. 10, lines 16-46). Production of the concave and convex sides of a blisk blade to final, precision dimensions (col. 10, lines 16-46) inherently minimizes boundary layers because a blisk blade is designed to reduce boundary layer effects for efficiency, and that a blisk blade to final dimensions is a minimum amongst a blisk blade with bulk dimensions.

Response to Arguments

11. Applicant's arguments filed 15 December 2010 have been fully considered but they are not persuasive. In regards to Applicant's argument about Mielke and the steps of contouring and producing a structure, please see rejection ground stated above. In regards to Lamphere et al., please see Burns et al. which details the conventional electrode surfaces with more detail as stated above.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICHOLAS A. SMITH whose telephone number is (571)272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571)-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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NAS

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1723